

09/206,184

SEARCH TRANSCRIPT

- DON'T REMOVE -

FILE 'HOME' ENTERED AT 12:00:53 ON 01 MAY 2003

=> file reg

COST IN U.S. DOLLARS

SINCE FILE

TOTAL

ENTRY

SESSION

FULL ESTIMATED COST

0.21

0.21

FILE 'REGISTRY' ENTERED AT 12:00:57 ON 01 MAY 2003

USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.

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Property values tagged with IC are from the ZIC/VINITI data file provided by InfoChem.

STRUCTURE FILE UPDATES: 30 APR 2003 HIGHEST RN 508165-25-1

DICTIONARY FILE UPDATES: 30 APR 2003 HIGHEST RN 508165-25-1

TSCA INFORMATION NOW CURRENT THROUGH JANUARY 6, 2003

Please note that search-term pricing does apply when conducting SmartSELECT searches.

Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are now available. See HELP PROPERTIES for more information. See STNote 27, Searching Properties in the CAS Registry File, for complete details:
<http://www.cas.org/ONLINE/STN/STNOTES/stnotes27.pdf>

=> s acetic ether/cn

L1 1 ACETIC ETHER/CN

=> d

L1 ANSWER 1 OF 1 REGISTRY COPYRIGHT 2003 ACS

RN 141-78-6 REGISTRY

CN Acetic acid ethyl ester (8CI, 9CI) (CA INDEX NAME)

OTHER NAMES:

CN Acetic acid, ethyl ester

CN **Acetic ether**

CN Acetidin

CN Acetoxyethane

CN Ethyl acetate

CN Ethyl ethanoate

CN EtOAc

CN Vinegar naphtha

FS 3D CONCORD

MF C4 H8 O2

CI COM

LC STN Files: AGRICOLA, ANABSTR, AQUIRE, BEILSTEIN*, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CANCERLIT, CAPLUS, CASREACT, CBNB, CEN, CHEMCATS, CHEMINFORMRX, CHEMLIST, CHEMSAFE, CIN, CSCHM, CSNB, DDFU, DETHERM*, DIPPR*, DRUGU, EMBASE, ENCOMPLIT, ENCOMPLIT2, ENCOMPPAT, ENCOMPPAT2, GMELIN*, HODOC*, HSDB*, IFICDB, IFIPAT, IFIUDB, IPA, MEDLINE, MRCK*, MSDS-OHS, NAPRALERT, NIOSHTIC, PDLCOM*, PIRA, PROMT, RTECS*, SPECINFO, SYNTHLINE, TOXCENTER, TULSA, ULIDAT, USAN, USPAT2, USPATFULL, VETU, VTB
(*File contains numerically searchable property data)

Other Sources: DSL**, EINECS**, TSCA**

(**Enter CHEMLIST File for up-to-date regulatory information)

Et-O-Ac

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

21784 REFERENCES IN FILE CA (1957 TO DATE)
103 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
21826 REFERENCES IN FILE CAPLUS (1957 TO DATE)

=> s acetaldehyde/cn
L2 1 ACETALDEHYDE/CN

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	10.92	11.13

FILE 'CAPLUS' ENTERED AT 12:01:56 ON 01 MAY 2003
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
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COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	0.42	11.55

FILE 'REGISTRY' ENTERED AT 12:02:00 ON 01 MAY 2003
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
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STRUCTURE FILE UPDATES: 30 APR 2003 HIGHEST RN 508165-25-1
DICTIONARY FILE UPDATES: 30 APR 2003 HIGHEST RN 508165-25-1

TSCA INFORMATION NOW CURRENT THROUGH JANUARY 6, 2003

Please note that search-term pricing does apply when conducting SmartSELECT searches.

Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are now available. See HELP PROPERTIES for more information. See STNote 27, Searching Properties in the CAS Registry File, for complete details:
<http://www.cas.org/ONLINE/STN/STNOTES/stnotes27.pdf>

=> s ethanol
L3 194593 ETHANOL

=> s ethanol/cn
L4 1 ETHANOL/CN

COST IN U.S. DOLLARS	SINCE FILE	TOTAL
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FULL ESTIMATED COST

ENTRY SESSION
8.84 20.39

FILE 'CAPLUS' ENTERED AT 12:02:19 ON 01 MAY 2003
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
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FILE COVERS 1907 - 1 May 2003 VOL 138 ISS 18
FILE LAST UPDATED: 30 Apr 2003 (20030430/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> s l1 and l2 and l4

21830 L1

28984 L2

150701 L4

L5 1480 L1 AND L2 AND L4

=> s l5 and hydrogenation

155335 HYDROGENATION

1958 HYDROGENATIONS

155574 HYDROGENATION

(HYDROGENATION OR HYDROGENATIONS)

L6 46 L5 AND HYDROGENATION

=> s l6 and mixture

63059 MIXTURE

120790 MIXTURES

181010 MIXTURE

(MIXTURE OR MIXTURES)

1358966 MIXT

490917 MIXTS

1671059 MIXT

(MIXT OR MIXTS)

1716069 MIXTURE

(MIXTURE OR MIXT)

L7 15 L6 AND MIXTURE

=> d 1-15

L7 ANSWER 1 OF 15 CAPLUS COPYRIGHT 2003 ACS

AN 2000:462546 CAPLUS

DN 133:49558

TI Catalyst for preparing ethanol from acetaldehyde, ethyl acetate, and/or acetic acid by **hydrogenation**

IN Lin, Peici; Zhou, Huanwen; Luo, Hongyuan; Wang, Haifeng; Wu, Zhihua; Huang, Shiyu; Chu, Huiping

PA Dalian Institute of Chemical Physics, Chinese Academy of Sciences, Peop. Rep. China

SO Faming Zhuanli Shenqing Gongkai Shuomingshu, 7 pp.

CODEN: CNXXEV
DT Patent
LA Chinese
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	CN 1230458	A	19991006	CN 1998-113865	19980326
PRAI	CN 1998-113865		19980326		

L7 ANSWER 2 OF 15 CAPLUS COPYRIGHT 2003 ACS
AN 2000:227366 CAPLUS
DN 132:238697
TI Process for the manufacture of ethyl acetate from ethanol
IN Colley, Stephen William; Fawcett, Christopher Richard; Rathmell, Colin;
Tuck, Michael William Marshall
PA Kvaerner Process Technology Limited, UK
SO Eur. Pat. Appl., 22 pp.
CODEN: EPXXDW
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 990638	A1	20000405	EP 1998-308011	19981001
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
CA	2345990	AA	20000413	CA 1999-2345990	19990929
WO	2000020375	A1	20000413	WO 1999-GB3230	19990929
	W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
AU	9961073	A1	20000426	AU 1999-61073	19990929
EP	1117631	A1	20010725	EP 1999-947696	19990929
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
JP	2002526520	T2	20020820	JP 2000-574493	19990929
PRAI	EP 1998-308011	A	19981001		
	WO 1999-GB3230	W	19990929		

RE.CNT 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 3 OF 15 CAPLUS COPYRIGHT 2003 ACS
AN 1992:614947 CAPLUS
DN 117:214947
TI Kinetic and transient kinetic investigations of the synthesis of oxygenates from carbon monoxide/hydrogen mixtures on supported rhodium catalysts
AU Burch, R.; Petch, M. I.
CS Chem. Dep., Univ. Reading, Reading, RG6 2AD, UK
SO Applied Catalysis, A: General (1992), 88(1), 77-99
CODEN: ACAGE4; ISSN: 0926-860X
DT Journal
LA English

L7 ANSWER 4 OF 15 CAPLUS COPYRIGHT 2003 ACS
AN 1992:593997 CAPLUS
DN 117:193997
TI Investigation of the reactions of acetaldehyde on promoted rhodium

catalysts

AU Burch, R.; Petch, M. I.
CS Chem. Dep., Univ. Reading, Reading, RG6 2AD, UK
SO Applied Catalysis, A: General (1992), 88(1), 61-76
CODEN: ACAGE4; ISSN: 0926-860X
DT Journal
LA English

L7 ANSWER 5 OF 15 CAPLUS COPYRIGHT 2003 ACS
AN 1992:593996 CAPLUS
DN 117:193996
TI Investigation of the synthesis of oxygenates from carbon monoxide/hydrogen
mixtures on supported rhodium catalysts
AU Burch, R.; Petch, M. I.
CS Chem. Dep., Univ. Reading, Reading, RG6 2AD, UK
SO Applied Catalysis, A: General (1992), 88(1), 39-60
CODEN: ACAGE4; ISSN: 0926-860X
DT Journal
LA English

L7 ANSWER 6 OF 15 CAPLUS COPYRIGHT 2003 ACS
AN 1990:574433 CAPLUS
DN 113:174433
TI Syngas reactions. XII. The selective preparation of acetaldehyde,
alkanols, esters and acetic acid from synthesis gas
AU Knifton, John F.; Lin, J. J.
CS Texaco Chem. Co., Austin, TX, 78761, USA
SO Applied Organometallic Chemistry (1989), 3(6), 557-62
CODEN: AOCHEX; ISSN: 0268-2605
DT Journal
LA English

L7 ANSWER 7 OF 15 CAPLUS COPYRIGHT 2003 ACS
AN 1990:510941 CAPLUS
DN 113:110941
TI Aggregation pheromones of the dried fruit beetle, Carpophilus hemipterus
IN Bartelt, Robert J.; Dowd, Patrick F.
PA Agricultural Research Service, USA
SO U. S. Pat. Appl., 32 pp. Avail. NTIS Order No. PAT-APPL-7-275 863.
CODEN: XAXXAV
DT Patent
LA English

FAN.CNT 3

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 275863	A0	19900301	US 1988-275863	19881125
	US 5011683	A	19910430		
	US 387555	A0	19900301	US 1989-387555	19890731
	US 5008478	A	19910416		
	US 610903	A0	19910315	US 1990-610903	19901109
	US 5149525	A	19920922		
PRAI	US 1988-275863		19881125		
	US 1989-387555		19890731		
OS	MARPAT 113:110941				

L7 ANSWER 8 OF 15 CAPLUS COPYRIGHT 2003 ACS
AN 1990:436426 CAPLUS
DN 113:36426
TI Aggregation pheromones of nitidulid beetles: Carpophilus hemipterus, C.
lugubris and C. freemani
IN Bartelt, Robert J.; Dowd, Patrick F.
PA Agricultural Research Service, USA
SO U. S. Pat. Appl., 59 pp. Avail. NTIS Order No. PAT-APPL-7-387 555
CODEN: XAXXAV

DT Patent
LA English

FAN.CNT 3

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 387555	A0	19900301	US 1989-387555	19890731
	US 5008478	A	19910416		
	US 275863	A0	19900301	US 1988-275863	19881125
	US 5011683	A	19910430		
	US 610903	A0	19910315	US 1990-610903	19901109
	US 5149525	A	19920922		
PRAI	US 1988-275863		19881125		
	US 1989-387555		19890731		
OS	MARPAT 113:36426				

L7 ANSWER 9 OF 15 CAPLUS COPYRIGHT 2003 ACS

AN 1985:424081 CAPLUS

DN 103:24081

TI Oxygen-containing compounds

PA Agency of Industrial Sciences and Technology, Japan

SO Jpn. Kokai Tokkyo Koho, 9 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 60032725	A2	19850219	JP 1983-141090	19830803
	JP 61014128	B4	19860417		
PRAI	JP 1983-141090		19830803		

L7 ANSWER 10 OF 15 CAPLUS COPYRIGHT 2003 ACS

AN 1985:184736 CAPLUS

DN 102:184736

TI Oxygen-containing C2-compounds

PA Agency of Industrial Sciences and Technology, Japan

SO Jpn. Kokai Tokkyo Koho, 6 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 59227832	A2	19841221	JP 1983-101632	19830609
	JP 60039655	B4	19850906		
PRAI	JP 1983-101632		19830609		

L7 ANSWER 11 OF 15 CAPLUS COPYRIGHT 2003 ACS

AN 1985:61802 CAPLUS

DN 102:61802

TI **Mixtures** of acetic acid, propionic acid and butyric acid

IN Leupold, Ernst; Schmidt, Hans Joachim

PA Hoechst A.-G. , Fed. Rep. Ger.

SO Ger. Offen., 13 pp.

CODEN: GWXXBX

DT Patent

LA German

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 3318210	A1	19841129	DE 1983-3318210	19830519
	EP 129058	A1	19841227	EP 1984-105507	19840515
	EP 129058	B1	19860723		
	R: BE, DE, FR, GB, IT, NL				

CA 1230611	A1	19871222	CA 1984-454541	19840517
AU 8428396	A1	19841122	AU 1984-28396	19840518
ZA 8403766	A	19841224	ZA 1984-3766	19840518
JP 60006633	A2	19850114	JP 1984-98882	19840518
PRAI DE 1983-3318210		19830519		

L7 ANSWER 12 OF 15 CAPLUS COPYRIGHT 2003 ACS
 AN 1982:51800 CAPLUS
 DN 96:51800
 TI Oxygenated hydrocarbons from synthesis gas
 IN Ball, William John; Stewart, David Gordon
 PA British Petroleum Co. Ltd. , UK
 SO Eur. Pat. Appl., 12 pp.
 CODEN: EPXXDW
 DT Patent
 LA English
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 33212	A2	19810805	EP 1981-300240	19810120
	EP 33212	A3	19810909		
	R: BE, DE, FR, GB, IT, NL				
	ZA 8100333	A	19820825	ZA 1981-333	19810119
	CA 1151670	A1	19830809	CA 1981-369020	19810121
	JP 56104828	A2	19810820	JP 1981-9537	19810123
PRAI	GB 1980-2466		19800124		
	GB 1980-2467		19800124		

L7 ANSWER 13 OF 15 CAPLUS COPYRIGHT 2003 ACS
 AN 1981:497027 CAPLUS
 DN 95:97027
 TI Oxygen-containing hydrocarbon compounds
 IN Ichikawa, Masaru; Shikakura, Kohichi; Sekizawa, Kazuhiko; Tanaka, Kazuaki
 PA Sagami Chemical Research Center, Japan
 SO Eur. Pat. Appl., 79 pp.
 CODEN: EPXXDW
 DT Patent
 LA English
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 22358	A1	19810114	EP 1980-302264	19800703
	EP 22358	B1	19830622		
	R: AT, BE, CH, DE, FR, GB, IT, NL				
	JP 56008332	A2	19810128	JP 1979-83521	19790703
	JP 56051425	A2	19810509	JP 1979-126823	19791003
	JP 61025690	B4	19860617		
	JP 56147730	A2	19811116	JP 1980-51762	19800421
	JP 61054771	B4	19861125		
	JP 56147731	A2	19811116	JP 1980-51763	19800421
	ES 493024	A1	19810616	ES 1980-493024	19800702
	BR 8004156	A	19810203	BR 1980-4156	19800703
	AT 3847	E	19830715	AT 1980-302264	19800703
	US 4463105	A	19840731	US 1982-387265	19820609
	US 4506033	A	19850319	US 1983-517990	19830729
PRAI	JP 1979-83521		19790703		
	JP 1979-126823		19791003		
	JP 1980-51762		19800421		
	JP 1980-51763		19800421		
	US 1980-165005		19800701		
	EP 1980-302264		19800703		
	US 1980-221611		19801231		
	US 1982-348193		19820212		

L7 ANSWER 14 OF 15 CAPLUS COPYRIGHT 2003 ACS
 AN 1954:7335 CAPLUS
 DN 48:7335
 OREF 48:1409a-c
 TI Multistage process for condensing hydrocarbon synthesis products
 IN Catterall, Wm. E.; Ohsol, Ernest O.
 PA Standard Oil Development Co.
 DT Patent
 LA Unavailable
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2614115		19521014	US	

L7 ANSWER 15 OF 15 CAPLUS COPYRIGHT 2003 ACS
 AN 1948:4093 CAPLUS
 DN 42:4093
 OREF 42:864b-g
 TI Reversibility of the esteric condensation of aldehydes
 AU Slobodin, Ya. M.; Rachinskii, F. Yu.; Avtokratova, O. D.
 SO J. Gen. Chem. (U.S.S.R.) (1947), 17, 584-90
 DT Journal
 LA Russian

> s l6 and zone
 248662 ZONE
 92640 ZONES
 308117 ZONE
 (ZONE OR ZONES)
 L12 1 L6 AND ZONE

=> d

L12 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2003 ACS
 AN 2000:227366 CAPLUS
 DN 132:238697
 TI Process for the manufacture of ethyl acetate from ethanol
 IN Colley, Stephen William; Fawcett, Christopher Richard; Rathmell, Colin;
 Tuck, Michael William Marshall
 PA Kvaerner Process Technology Limited, UK
 SO Eur. Pat. Appl., 22 pp.
 CODEN: EPXXDW
 DT Patent
 LA English
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 990638	A1	20000405	EP 1998-308011	19981001
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
	CA 2345990	AA	20000413	CA 1999-2345990	19990929
	WO 2000020375	A1	20000413	WO 1999-GB3230	19990929
	W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
	AU 9961073	A1	20000426	AU 1999-61073	19990929
	EP 1117631	A1	20010725	EP 1999-947696	19990929

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
 IE, SI, LT, LV, FI, RO
 JP 2002526520 T2 20020820 JP 2000-574493 19990929
 PRAI EP 1998-308011 A 19981001
 WO 1999-GB3230 W 19990929
 RE.CNT 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> s l6 and step
 MISSING TERM AFTER L6 AND
 Operators must be followed by a search term, L-number, or query name.

=> s l6 and prod?
 4028828 PROD?
 L13 29 L6 AND PROD?

=> s l13 and hydrogen
 748458 HYDROGEN
 5113 HYDROGENS
 751366 HYDROGEN
 (HYDROGEN OR HYDROGENS)
 L14 8 L13 AND HYDROGEN

=> d 1-8

L14 ANSWER 1 OF 8 CAPLUS COPYRIGHT 2003 ACS
 AN 2000:227366 CAPLUS
 DN 132:238697
 TI Process for the manufacture of ethyl acetate from ethanol
 IN Colley, Stephen William; Fawcett, Christopher Richard; Rathmell, Colin;
 Tuck, Michael William Marshall
 PA Kvaerner Process Technology Limited, UK
 SO Eur. Pat. Appl., 22 pp.
 CODEN: EPXXDW
 DT Patent
 LA English
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 990638	A1	20000405	EP 1998-308011	19981001
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
	CA 2345990	AA	20000413	CA 1999-2345990	19990929
	WO 2000020375	A1	20000413	WO 1999-GB3230	19990929
	W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
	AU 9961073	A1	20000426	AU 1999-61073	19990929
	EP 1117631	A1	20010725	EP 1999-947696	19990929
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
	JP 2002526520	T2	20020820	JP 2000-574493	19990929
PRAI	EP 1998-308011	A	19981001		
WO	1999-GB3230	W	19990929		
RE.CNT	5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT				

L14 ANSWER 2 OF 8 CAPLUS COPYRIGHT 2003 ACS
 AN 1998:307417 CAPLUS
 DN 128:272002
 TI **Hydrogenation** of diethyl adipate in a catalytic fixed bed reactor
 AU Jaganathan, Rengaswamy; Chaudhari, Sopan T.; Rode, Chandrashekhar V.; Chaudhari, Raghunath V.; Mills, Patrick L.
 CS Chemical Engineering Division, National Chemical Laboratory, Pune, 411008, India
 SO Industrial & Engineering Chemistry Research (1998), 37(6), 2099-2106
 CODEN: IECRED; ISSN: 0888-5885
 PB American Chemical Society
 DT Journal
 LA English

L14 ANSWER 3 OF 8 CAPLUS COPYRIGHT 2003 ACS
 AN 1996:369616 CAPLUS
 DN 125:171484
 TI Synthesis of C2 oxygen-containing compounds from carbon monoxide and **hydrogen** on rhodium-containing heterogeneous catalysts under pressure
 AU Mamedov, A. P.
 CS Aktsionernoe Obshchestvo Vserossiiskii Nauchno-Issledovatel'skii Institut Organicheskogo Sintez, Moscow, Russia
 SO Neftekhimiya (1996), 36(2), 132-141
 CODEN: NEFTAH; ISSN: 0028-2421
 PB Nauka
 DT Journal
 LA Russian

L14 ANSWER 4 OF 8 CAPLUS COPYRIGHT 2003 ACS
 AN 1992:614947 CAPLUS
 DN 117:214947
 TI Kinetic and transient kinetic investigations of the synthesis of oxygenates from carbon monoxide/**hydrogen** mixtures on supported rhodium catalysts
 AU Burch, R.; Petch, M. I.
 CS Chem. Dep., Univ. Reading, Reading, RG6 2AD, UK
 SO Applied Catalysis, A: General (1992), 88(1), 77-99
 CODEN: ACAGE4; ISSN: 0926-860X
 DT Journal
 LA English

L14 ANSWER 5 OF 8 CAPLUS COPYRIGHT 2003 ACS
 AN 1992:593996 CAPLUS
 DN 117:193996
 TI Investigation of the synthesis of oxygenates from carbon monoxide/**hydrogen** mixtures on supported rhodium catalysts
 AU Burch, R.; Petch, M. I.
 CS Chem. Dep., Univ. Reading, Reading, RG6 2AD, UK
 SO Applied Catalysis, A: General (1992), 88(1), 39-60
 CODEN: ACAGE4; ISSN: 0926-860X
 DT Journal
 LA English

L14 ANSWER 6 OF 8 CAPLUS COPYRIGHT 2003 ACS
 AN 1990:422843 CAPLUS
 DN 113:22843
 TI Promotion effect of mixed halides on homogeneous ruthenium catalysis in direct synthesis of ethanol from **hydrogen** and carbon monoxide
 AU Ono, Hiroshi; Fujiwara, Kenji; Hashimoto, Masao; Sugiyama, Eiichi; Yoshida, Kenji
 CS Cent. Res. Inst., Mitsui-Toatsu Chem. Inc., Yokohama, 247, Japan
 SO Journal of Molecular Catalysis (1989), 57(1), 113-23

CODEN: JMCADS; ISSN: 0304-5102
DT Journal
LA English
OS CASREACT 113:22843

L14 ANSWER 7 OF 8 CAPLUS COPYRIGHT 2003 ACS
AN 1989:598187 CAPLUS
DN 111:198187
TI Higher alcohols synthesis from carbon monoxide + **hydrogen** on
cobalt-copper catalyst: use of probe molecules and chemical trapping in
the study of the reaction mechanism
AU Kiennemann, A.; Diagne, C.; Hindermann, J. P.; Chaumette, P.; Courty, P.
CS Lab. Chim. Org. Appl., EHICS, Strasbourg, 67008, Fr.
SO Applied Catalysis (1989), 53(2-3), 197-216
CODEN: APCADI; ISSN: 0166-9834
DT Journal
LA English

L14 ANSWER 8 OF 8 CAPLUS COPYRIGHT 2003 ACS
AN 1985:45435 CAPLUS
DN 102:45435
TI Selective synthesis of C2-oxygenated compounds from synthesis gas over
iridium-ruthenium bimetallic catalysts
AU Hamada, Hideaki; Kuwahara, Yasushi; Kintaichi, Yoshiaki; Ito, Takehiko;
Wakabayashi, Katsuhiko; Tijima, Hitoshi; Sano, Kenichi
CS Natl. Chem. Lab. Ind., Yatabe, 305, Japan
SO Chemistry Letters (1984), (9), 1611-12
CODEN: CMLTAG; ISSN: 0366-7022
DT Journal
LA English

=> d his

(FILE 'HOME' ENTERED AT 12:00:53 ON 01 MAY 2003)

FILE 'REGISTRY' ENTERED AT 12:00:57 ON 01 MAY 2003

L1 1 S ACETIC ETHER/CN
L2 1 S ACETALDEHYDE/CN

FILE 'CAPLUS' ENTERED AT 12:01:56 ON 01 MAY 2003

FILE 'REGISTRY' ENTERED AT 12:02:00 ON 01 MAY 2003

L3 194593 S ETHANOL
L4 1 S ETHANOL/CN

FILE 'CAPLUS' ENTERED AT 12:02:19 ON 01 MAY 2003

L5 1480 S L1 AND L2 AND L4
L6 46 S L5 AND HYDROGENATION
L7 15 S L6 AND MIXTURE
L8 0 S FORMATION OF GAMMA BUTYROLACTAM
L9 210 S GAMMA BUTYROLACTAM
L10 0 S L9 AND STOMACH
L11 1 S L9 AND HYDROCHLORIC
L12 1 S L6 AND ZONE
L13 29 S L6 AND PROD?
L14 8 S L13 AND HYDROGEN

=> s l1/prep and l5

21830 L1
2996409 PREP/RL
1398 L1/PREP
(L1 (L) PREP/RL)
L15 170 L1/PREP AND L5

=> s l15 and hydroge?
1006116 HYDROGE?
L16 52 L15 AND HYDROGE?

=> s l16 and (zone or step)
248662 ZONE
92640 ZONES
308117 ZONE
(ZONE OR ZONES)
346527 STEP
221075 STEPS
528166 STEP
(STEP OR STEPS)
L17 2 L16 AND (ZONE OR STEP)

=> d 1-2

L17 ANSWER 1 OF 2 CAPLUS COPYRIGHT 2003 ACS
AN 2002:360765 CAPLUS
DN 137:142136
TI Acetic acid reduction to acetaldehyde over iron catalysts
AU Rachmady, Willy; Vannice, M. Albert
CS Department of Chemical Engineering, Pennsylvania State University,
University Park, PA, 16802-4400, USA
SO Journal of Catalysis (2002), 208(1), 158-169
CODEN: JCTLA5; ISSN: 0021-9517
PB Elsevier Science
DT Journal
LA English
RE.CNT 59 THERE ARE 59 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L17 ANSWER 2 OF 2 CAPLUS COPYRIGHT 2003 ACS
AN 1990:138372 CAPLUS
DN 112:138372
TI Giant palladium clusters as catalysts of oxidative reactions of olefins
and alcohols
AU Vargaftik, M. N.; Zagorodnikov, V. P.; Stolyarov, I. P.; Moiseev, I. I.;
Kochubey, D. I.; Likholobov, V. A.; Chuvilin, A. L.; Zamaraev, K. I.
CS N. S. Kurnakov Inst. Gen. Inorg. Chem., Moscow, 117907, USSR
SO Journal of Molecular Catalysis (1989), 53(3), 315-48
CODEN: JMCADS; ISSN: 0304-5102
DT Journal
LA English

=> d abs 1

L17 ANSWER 1 OF 2 CAPLUS COPYRIGHT 2003 ACS
AB The vapor-phase redn. of acetic acid by H₂ over both supported and
unsupported iron was studied. Typical Fe catalysts increased in activity
over a 4- to 5-h period to reach a steady state whereas the Fe/carbon
catalyst deactivated completely during this initial time on stream. The
best catalysts gave selectivities to acetaldehyde between 95 and 100% at
low conversions (<12%), but selectivity dropped to .apprx.80% as
conversions approached 40%. This parameter was enhanced as the H₂
pressure increased, but was almost independent of the acetic acid partial
pressure. The turnover frequency for acetic acid disappearance to redn.
products increased markedly from 0.003 to 0.058 s⁻¹ and the apparent
activation energy decreased from about 27 to 16 kcal/mol as the Fe
crystallite size increased from 10 to 4000 nm. Highly dispersed 1-nm
crystallites on SiO₂ exhibited no **hydrogenation** activity and
gave only decompn. products. Acetic acid redn. over Fe is described well

by a Langmuir-Hinshelwood model invoking two types of sites, i.e., one set on metallic Fe atoms that adsorbs and activates H₂, and the other on an Fe oxide surface that adsorbs acetic acid to form an acetate species. The addn. of the second H atom to form acetaldehyde appears to be the rate-detg. **step**.

=> logoff

ALL L# QUERIES AND ANSWER SETS ARE DELETED AT LOGOFF

LOGOFF? (Y)/N/HOLD:y

COST IN U.S. DOLLARS

SINCE FILE

TOTAL

ENTRY

SESSION

FULL ESTIMATED COST

64.52

84.91